

CHAPTER 4

SECTION 4.3

RADIATION THERAPY

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I. DESCRIPTION

Radiation therapy is the branch of medicine that utilizes ionizing radiation in the treatment of malignant neoplasms.

II. POLICY

A. Hyperfractionated radiation therapy is the use of multiple small fractions of radiation given two or more times per day. Benefits may be extended for hyperfractionated radiation therapy when determined to be medically necessary and appropriate.

1. There are no categorical limitations on the use of hyperfractionated radiation therapy, and indications and patient selection will vary as with any other form of radiotherapy.

2. The ideal tumor cell characteristics for hyperfractionation treatment are: (1) **continuous destruction of the tumor cell as reflected by** an absence of a **plateau** on the cell survival curve; (2) an otherwise radiosensitive tumor cell line; (3) short cell cycle time; and (4) high growth fraction. These characteristics are typical for small cell carcinoma of the lung, many pediatric tumors, and most lymphomas.

3. Following is a list of conditions for which hyperfractionated radiation therapy has been used. This list is not all inclusive and should not be used as such:

- a. Advanced head and neck cancers.
- b. Lung cancers.
- c. Malignant astrocytoma.
- d. Glioblastomas.
- e. Pediatric brainstem glioma.
- f. Soft tissue sarcoma.

g. Malignant lymphomas.

B. Benefits may be extended for fast neutron radiotherapy for treatment of adenoid cystic carcinoma **and malignant salivary gland tumors.**

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